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THE

THIRTY-FIRST ANNUAL REPORT

OF THE

BOARD OF DIRECTORS

OF THE

ZOOLOGICAL SOCIETY

OF PHILADELPHIA.

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(INCORPORATED MARCH 21ST, 1859.)

READ AT THE ANNUAL MEETING OF THE MEMBERS AND LOAN-HOLDERS OF THE SOCIETY.

APRIL 23d, 1903.

PHILADELPHIA:
PRESS OF ALLEN, LANE & SCOTT.
1211-1213 Clover Street.
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THE

ZOOLOGICAL SOCIETY OF PHILADELPHIA.

OFFICE, THIRTY-FOURTH STREET AND GIRARD AVENUE,
FAIRMOUNT PARK.

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ASSISTANT SUPERINTENDENT.

ROBERT D. CARSON.

REPORT

OF THE

BOARD OF DIRECTORS.

PHILADELPHIA, April 23d, 1903.

The Board of Directors of the Zoological Society of Philadelphia presents to the members and loanholders its thirty-first annual report for the year ending February 28th, 1903.

GENERAL AFFAIRS AND FINANCES.

The number of members at the close of the year was :—

Annual members	217
Life members	1,284
Corresponding members	8
Honorary members	16
Perpetual members	259
Junior members	67
Total members	1,851

The following is a report in detail of the admissions and receipts for the year :—

Adults (paying at gates)	159,536
Children (paying at gates)	49,749
Members (including Life and Annual Members, loanholders' annual, and complimentary annual tickets)	2,266
Loanholders' single tickets	12,988
Free admissions (charitable institutions, donors' tickets, &c.)*	3,592
Coupon tickets	204
Excursion tickets	4,220
	232,555

* In addition to these, 125,000 tickets were issued to the Board of Education, for the admission of pupils of the Public Schools.

Monthly Record of Receipts from Admissions for 1902–1903 with corresponding account for 1901–1902.

Month.	1901–1902.	1902–1903.	Comparison.	
March . .	$1,366 32	$1,708 90	Increase .	$342 58
April . . .	2,138 54	2,254 30	" .	115 76
May . . .	3,056 26	4,567 20	" .	1,510 94
June . . .	2,861 52	3,299 35	" .	437 83
July . .	2,370 34	4,164 00	" .	1,793 66
August . .	3,909 02	5,992 95	" .	2,083 93
September,	3,843 53	3,457 95	Decrease .	385 58
October . .	2,745 99	2,596 50	" .	149 49
November,	1,360 06	2,252 90	Increase .	892 84
December .	835 95	677 40	Decrease .	158 55
January .	692 85	756 40	Increase .	63 55
February .	437 00	748 70	" .	311 70
	$25,617 38	$32,476 55	Increase .	$6,859 17

An increase in admissions has been steady throughout the year, three months only showing a decrease, in amounts so small as to be fully accounted for by unfavorable weather.

Beginning on Saturday, May 24th, instrumental concerts were given on three afternoons in each week, until the last of July, the cost being generously met by a member of the Society. Although these concerts were enjoyable to the visitors present, it is sufficiently evident that they cannot be continued by the Board as a source of revenue, for a careful analysis of the gate receipts shows that neither during the whole period, nor on the single days when they were held, was there any noticeable advance over the general percentage of increase for the remaining portion of the year.

The growing study of the collection by pupils of the Public Schools is highly gratifying. From early May to the commencement of the summer vacation there were few weekdays on which the Gardens were not visited by large parties, in charge of their teachers. On many days the number admitted exceeded two thousand.

Mr. Charles L. Jefferson, the Actuary of the Society, died suddenly, in his office, on April 16th, 1902. Mr. Jefferson's connection with the Society began in 1873, as clerk to the Board, and his faithful service as ticket seller and as Actuary, or chief accountant, covered a period of nearly thirty years. After his death the office of Actuary was abolished and the duties rearranged.

The Gardens and Menagerie.

The number of specimens exhibited in the collection during the year was :—

Mammals	490
Birds	943
Reptiles	955
Batrachians	62
	2,450

These species were exhibited for the first time in the Gardens :—

MAMMALIA.

Primates.

1. *Papio doguera* (P. and S.) Doguera Baboon.
   Hab., Abyssinia.
   A pair of baboons, the male of large size, were purchased in April from Carl Hagenbeck. They were said by him to have come from Abyssinia, and without doubt belong to this fine species, which has heretofore been little known.
2. *Microcebus coquereli* (Grand.) Coquerel's Dwarf Lemur.
   Hab., Madagascar.
   Four small lemurs purchased July 19th are referred provisionally to this species, although they appear to me to resemble more closely Milne Edwardes and Grandidier's plate of the head of *Chirogaleus major*,* of which their description has not yet been published.

* Hist. Nat. de Madagascar, pl. 259, fig. 5.

Carnivora.

3. *Felis chibigouazou* Griff. Brazilian Ocelot.
   Hab., Brazil to Guiana.
   A cat from Brazil, sent to the Gardens on February 28th on approval as a young jaguar, proved to be an adult male of the large tawny-headed ocelot from South America, to which Dr. Mearns considers that the name here used applies. Whatever may be the result of further study of these variable cats, there is no question that this species is very distinct from the small ocelot of the Rio Grande.
4. *Felis ruffus texensis* Allen. Texas Wild Cat.
   Hab., southwestern United States.
   One specimen of this variety of the common wild cat, characterized by indistinctness of the dark markings, was received September 13th from Pecos, Texas.
5. *Viverra megaspila* Blyth. Large-spotted Civet.
   Hab., Burmah to Sumatra.
   An adult pair of this fine species, from Singapore, received by purchase March 29th.
6. *Canis aureus* L. Common Jackal.
   Hab., southern Asia.
   A male and female about two-thirds grown. From Singapore. Purchased January 22d.

Insectivora.

7. *Centetes ecandatus* (Schr.) Tenrec.
   Hab., Madagascar.
   The few members of this curious family of insectivores are exceedingly rare in collections, and the Society was fortunate in securing two by purchase on July 20th. One of them is less than half the size of the other and is quite different in color, but no distinction in species is indicated by the teeth as far as they can be examined in life.

Chiroptera.

8. *Nyctinomus braziliensis* Is. Geoff. Snouty Bat.
   Hab., Texas to Brazil.
   A single example of this widely-ranging bat was presented March 21st by Mr. E. Meyenberg, Pecos, Texas. No member of the family *Emballonuridæ* has before been shown in the collection. Unfortunately, it has not been found possible to keep the insectivorous members of this order alive for any length of time in captivity.

AVES.

Passeres.

9. *Turdus aonalaschkae pallasi* (Cab.) Hermit Thrush.
   Hab., eastern North America.
   One specimen. Presented by Mr. Frank Nuttall.
10. *Grammatoptila striata* (Vig.) Striated Jay Thrush.
   Hab., India.
   One specimen. Purchased.
11. *Crateropus canorus* (L.) Jungle Babbler.
   Hab., India.
   One specimen. Purchased.
12. *Tanagra abbas* (Licht.) Abbot Tanager.
   Hab., Mexico and Central America.
   One specimen. Purchased.
13. *Estrelda bichenovi* (Vig. & Hors.) Bicheno's Finch.
   Hab., Australia.
   One specimen. Purchased.
14. *Poëphila acuticauda* Gould. Sharp-tailed Grass-finch.
   Hab., Australia.
   Two specimens. Purchased.
15. *Ploceus bengalensis* (L.) Bengal Weaver.
   Hab., India and Burmah.
   Two specimens. Purchased.

16. *Chrysomitris mexicanus* (Swain.) Mexican Siskin.
    Hab., Texas to Panama.
    Two specimens from Texas. Purchased.
17. *Serinus serinus* (L.) Serin Finch.
    Hab., Europe.
    Two specimens. Purchased.
18. *Emberiza rutila* Pall. Red-backed Bunting.
    Hab., eastern Asia.
    Two specimens. Purchased.
19. *Molothrus bonariensis* (Gm.) Silky Cowbird.
    Hab., Brazil to Patagonia.
    Two specimens. Purchased.
20. *Leistes superciliaris* Bp. Eyebrowed Troupial.
    Hab., Argentina.
    Two specimens. Purchased.
21. *Lamprotornis caudatus* (Müll.) Long-tailed Glossy Starling.
    Hab., Africa.
    One example of this beautiful bird. Purchased October 15th.
22. *Spodiopsar malabaricus* (Gm.) Malabar Mynah.
    Hab., India and Burmah.
    One specimen. Purchased.
23. *Temenuchus pagodarum* (Gm.) Black-headed Mynah.
    Hab., India.
    One specimen. Purchased.
24. *Acridotheres ginginianus* (Lath.) Indian Mynah.
    Hab., northern India.
    One specimen. Purchased.
25. *Cissa chinensis* Bodd. Hunting Crow.
    Hab., India.
    Two specimens. Purchased.
26. *Dendrocitta himalayensis* Blyth. Himalayan Tree Pie.
    Hab., northern India.
    One specimen. Purchased.
27. *Pitangus derbianus* (Kaup.) Derby's Tyran.
    Hab., Texas to South America.
    Two specimens. Purchased.

Picariæ.

28. *Cyanops asiatica* (Lath.) Blue-cheeked Barbet.
    Hab., India.
    One specimen. Purchased.
29. *Cyanops caniceps* (Frank.) Ashy-headed Barbet,
    Hab., India.
    One specimen. Purchased.

Psittaci.

30. *Lorius garrulus* (L.) Chattering Lory.
    Hab., Moluccas.
    One specimen. Purchased.
31. *Trichoglossus ornatus* (L.) Ornamental Lorikeet.
    Hab., Celebes.
    One specimen. Purchased.
32. *Glossopsittacus concinnus* (Shaw.) Musky Lorikeet.
    Hab., Australia.
    Two specimens. Purchased.
33. *Cacatua ophthalmica* Scl. Blue-eyed Cockatoo.
    Hab., New Britain.
    One specimen of this rare bird was purchased on March 29th and added to the extensive collection of parrots.
34. *Conurus rubrolarvatus* Mass. & Sou. Red-masked Conure.
    Hab., Ecuador and Peru.
    One specimen. Purchased.
35. *Chrysotis albifrons* (Sparr.) White-browed Amazon.
    Hab., western Mexico and Central America.
    Two specimens. Purchased.
36. *Palaeornis longicauda* (Bodd.) Malaccan Parrakeet.
    Hab., Malacca to Borneo.
    One specimen. Purchased.

Gallinæ.

37. *Penelope purpurascens* Wagl. Purplish Guan.
    Hab., Mexico to Honduras.
    Two specimens. Purchased.

38. *Ortalis leucogostra* (Gould). White-bellied Chachalaca.
Hab., western Central America.
One specimen. Purchased.

REPTILIA.

Chelonia.

39. *Testudo calcarata* Schn. Grooved Tortoise.
Hab., Africa.
A fine example of this tortoise weighing sixty pounds, from Abyssinia, was received on September 27th as a gift from Mr. Carl Hagenbeck, of Hamburg.

Lacertilia.

40. *Crotaphytus wizlizeni* B. & G. Leopard Collared Lizard.
Hab., western Texas to California.
One specimen from Pecos, Texas. Purchased.

Ophidia.

41. *Glauconia dulcis* (B. & G.) Texas Glauconia.
Hab., Texas and northern Mexico.
The snakes of the family *Glauconiidæ*, small in size and of burrowing habits, are not often taken alive, and the one specimen received from Pecos on May 3d, formed an interesting addition to the large series of North American reptiles.
42. *Eryx conicus* (Schn.) Conical Eryx.
Hab., India.
Three specimens. Purchased.
Although strictly belonging to the boas, these snakes are of small size, and, like the preceding species, are adapted to subterranean life.
43. *Zamenis mucocus* (L.) Indian Rat Snake.
Hab., southern Asia.
One specimen. Purchased.
44. *Contia episcopa episcopa* (Kenn.) Mitre Snake.
Hab., western Texas and northern Mexico.
One specimen from Pecos. Purchased.

45. *Tantilla nigriceps* Kenn. Black-headed Tantilla.
Hab., Texas to Arizona.
One specimen from Pecos. Purchased.

46. *Crotalus molossus* B. & G. Dog-headed Rattlesnake.
Hab., northern Mexico and border of United States.
One specimen from Colonia Garcia, Chihuahua.

47. *Crotalus oregonus* Holb. Pacific Rattlesnake.
Hab., Oregon and California.
Six specimens were received from Piru, Ventura County, California, at different times during the summer.

48. *Crotalus triseriatus* (Wagl.) Small Spotted Rattlesnake.
Hab., Mexico.
One specimen from Colonia Garcia. Purchased.

BATRACHIA.

Caudata.

49. *Spelerpes multiplicatus* Cope. Many-ribbed Salamander.
Hab., Arkansas.
Six specimens. Presented by Mr. Julius H. Hurter, of St. Louis, Mo.

50. *Desmognathus brimleyorum* Stej. Brimley's Newt.
Hab., Arkansas.
One specimen. Also presented by Mr. Hurter.

51. *Batrachoseps attenuatus* Esch. Slender Salamander.
Hab., California.
Nine specimens from Oakland. Purchased.

Attention may be directed to a few other additions of interest.

A young male American deer was received in October, 1899, from an unknown locality in the southwest, the identity of which has never been fully established. On March 12th of last year a female, clearly of the same species, was received from Tampico, Mexico. The pair are now regarded as *Mazama texana* Mearns, a beautiful species, which is found in southwestern Texas, its southern limit in eastern Mexico being yet unknown.

An example of the reddish king snake (*Ophibolus doliatus clericus*) was presented on April 24th by Mr. C. L. Anderson, of Moorestown, N. J. This is a rare transitional form, and although native to this portion of the Atlantic states, but two living specimens have been shown in the collection.

On May 10th a pair of American bison were received from the Allard herd in western Montana, and placed in the new buffalo inclosure.

An additional specimen of the lately described *Coluber subocularis* was received on May 12th from the Davis Mountains, Texas, the same locality from which the type specimens, referred to in the last report, were secured.

On May 16th a female Indian elephant, four years old, was received as a gift from a member of the Board of Directors. This animal measured upon arrival four feet four inches in height. She has been named "Kaiserin," and it is intended that she shall be trained to carry visitors upon her back, as was formerly the custom with the elephant "Jennie," which died in 1898.

A number of lemurs were purchased in July and September from Carl Hagenbeck. Ten of these belong to the species known as *Lemur mongoz*, and well illustrate its remarkable variability, among them being examples of each of the color forms to which the following names have been applied: *L. collaris* Geoff; *L. melanocephela* Gray; *L. xanthomystax* Gray, and *L. rufifrons* Geoff.

Among other animals purchased from Mr. Hagenbeck was an exceptionally fine lion, six years old. Since the death of "Pompey," who lived from 1874 to 1887 in the Gardens, the Society has had no specimen at all comparable to the one now secured.

A Chinese mynah (*Acridotheres cristatellus*) was presented on August 7th by Mr. Joshua Tevis.

On November 17th two cubs of the brown variety of the black American bear arrived at the Gardens. These interesting animals were secured by Mr. James Spear, Jr., of Philadelphia, on the Fraser River, in British Columbia,

and were generously presented by him to the Society. A further addition to the bear dens was made on January 6th by Mr. C. C. Worthington, of Shawnee-on-Delaware, Pa., in an unusually fine adult female black bear.

A splendid pair of one-year-old wild turkeys were received from Berkeley Springs, W. Va., as a gift from Mr. S. W. M. Peters.

The animals bred in the Gardens were as follows:—

1 hamadryas baboon (*Papio hamadryas*), February 9th.
2 tigers (*Felis tigris*), June 27th.
10 prairie wolves (*Canis latrans*), six on April 16th; four on May 3d.
2 red foxes (*Canis pennsylvanicus*), March 30th.
4 gray foxes (*Canis cinereo-argentatus*), May 3d and 6th.
2 bears, hybrid between grizzly bear (*Ursus horribilis*) ♂ and black bear (*U. americanus*), ♀, February 10th.
3 black bears (*U. americanus*), February 6th.
5 prairie dogs (*Cynomys ludovicianus*), May 21st.
14 European rabbits (*Lepus cuniculus*), March 26th, May 30th.
1 Persian wild ass (*Equus onager*), ♀, May 27th.
4 Indian antelope (*Antilope cervicapra*), 2♂, 2♀, February 16th and 17th, April 29th, June 20th.
2 nylghaie (*Boselaphus tragocamelus*), ♂♀, twins, February 21st.
1 red deer (*Cervus elaphus*), ♂, July 8th.
4 wapiti (*C. canadensis*), 1♂, 3♀, June 24th, July 8th, 12th, and 23d.
1 fallow deer (*C. dama*), ♂, June 7th.
1 Malayan sambur deer (*C. equinus*), ♀, April 18th.
5 hog deer (*C. porcinus*), 2♂, 3♀, March 1st and 24th, May 30th, June 7th, November 15th.
2 Virginia deer (*Mazama virginiana*), twins, June 12th.
4 six-banded armadillos (*Dasypus sexcinctus*), April 6th, July 19th.
1 vulpine phalanger (*Trichosurus vulpecula*), December 23d.

4 robust kangaroos (*Macropus robustus*), March, June, July, November.
7 silver pheasants (*Gennæus nycthemerus*), May 12th.
2 golden pheasants (*Chrysolophus pictus*), May 17th.
4 Amherst's pheasants (*C. amherstiæ*), May 27th.
6 wild turkeys (*Meleagris gallopavo*), June 8th.
6 scaly lizards (*Sceloporus poinsetti*), July 11th.
13 Marcy's garter snakes (*Eutænia marciana*), August 27th.
2 prairie rattlesnakes (*Sistrurus catenatus*), September 6th.

Destruction of newly-born young by the mother is usual among bears, and the hybrids mentioned above were killed almost immediately after birth. The cubs of the black species were left in strict seclusion and were not even seen by any person except the regular keeper; they were tended by the mother from February 6th, the date of birth, until February 17th, and it was hoped that they would be successfully reared, but on that day they also were destroyed.

The pathological investigations conducted by Dr. Penrose and Dr. White have been continued, and a report of their observations is printed herewith. An important outgrowth of this work has been a series of experiments to determine the hygienic effects upon many tropical and subtropical mammals of free access to fresh air, and of exposure to variations of temperature greater than those usually permitted in zoological gardens. A number of monkeys belonging to the African genera *Papio* and *Cercopithecus* were placed in a cage, movable upon rollers, which was run out of doors on the south side of the Monkey House each day during the winter, except in heavy storms, for periods ranging from ten minutes in very cold, to five hours in moderate weather. The lowest temperature which they encountered was 26° Fahr. These monkeys have remained in perfect health, with the exception of one, which died from a disease of the liver in no way related to the exposure.

A pair of yellow baboons (*Papio cynocephalus*) were allowed to remain out in the open cage which they had occupied during the summer, the shelter being a kennel at

the back, containing a box filled with straw. They were exposed early in January to a minimum of 11° F. without apparent discomfort, but on the 20th of that month they appeared to be suffering with cold at only 24°, and were at once removed indoors, where they promptly recovered.

A pair of young Indian antelopes (*Antilope cervicapra*), bred in the Gardens, have been kept in an outside inclosure without injury; the lowest record for the winter being 3° F.

With the commencement of cold weather the way was gradually felt in keeping down the warmth of the larger buildings, and before the end of the winter considerable variations were allowed to occur. Briefly reviewing the results for the whole season, it may be said that the minimum temperatures reached, were: in the Antelope House, 48°; Carnivora House, 43°; Monkey House, 42°; Elephant House, 38°; and in the last three it repeatedly fell below 48°; an average maximum for all these buildings being probably not much more than 60°. In no case has injurious effect, or even discomfort, been detected among the animals, which, on the contrary, have been remarkably free from sickness.

It may be recalled here that the large orang "Chief," which lived in the collection from November 16th, 1893, to November 3d, 1897, had been in the open air with snow on the ground before reaching the Gardens. After arrival, much less attention was paid to the temperature of his cage than has been the case with any of the other anthropoids owned by the Society, and it often fell to 60° or below. He was always healthy, and his death was caused by intussusception.

These observations suggest radical changes in our methods of treatment of many species in the directions indicated.

Beyond renewal of the roofs of the shelters in the cattle pens and deer park no extensive repairs have been required.

The city appropriation of $2500 for Permanent Improvements was employed in relaying asphalt walks, of which little now remains to be done.

The thanks of the Board are extended to all from whom gifts or favors have been received.

By order of the Board,

ARTHUR ERWIN BROWN,

Secretary.

INCOME AND EXPENDITURES.

For fiscal year ending February 28th, 1903.

INCOME.

Members' fees and dues	$1,170 00	
Admission receipts	32,476 55	
Donations	1,405 00	
Rents at Gardens	250 00	
Interest, discount, &c.	937 20	
Sundry receipts	1,284 64	
Sale of guide books	67 30	
Sales of animals	478 50	
Received from the City of Philadelphia through the Commissioners of Fairmount Park	17,500 00	
		$55,569 19

EXPENDITURES.

(Exclusive of Permanent Improvements, &c.)

Salaries and wages	$20,285 62		
Office expenses	239 01		
General expenses	25,154 28		
Purchase of animals	7,382 85		
		$53,061 76	
Balance to credit of profit and loss		2,507 43	
			$55,569 19

CAPITAL.

For fiscal year ending February 28th, 1903.

RECEIPTS.

Life memberships	$600 00	
Legacy, estate of Francis W. Lewis, deceased	1,000 00	
Received from the City of Philadelphia through the Commissioners of Fairmount Park	2,499 37	
		$4,099 37

EXPENDITURES.

Vulcanite walks	$2,499 37	
Balance (being excess of receipts over expenditures of capital	1,600 00	
		$4,099 37

HENRY T. COATES,
Treasurer.

Audited March 11, 1903, and found correct.

STOCKTON BATES,
C. P. A.

LIST OF ANIMALS EXAMINED, WITH THE PATHOLOGICAL CONDITIONS FOUND.

1. Prong-horn Antelope (*Antilocapra americana*).
   Chronic diffuse nephritis. Cardiac hypertrophy. Hemorrhage in the supra renal body.
2. Mule Deer (*Odocoileus hemionus*).
   Cysticerci of *Tænia marginata* involving the peritoneum. Chronic diffuse nephritis.
3. Blue Jay (*Cyanocitta cristatus*).
   Cause of death not discovered.
4. Hog Deer (*Cervus porcinus*).
   Acute infection of unknown character.
5. Black Swan (*Chenopis atrata*).
   Ulcerative gastro-enteritis.
6. Mongoose (*Crossarchus fasciatus*).
   Hemorrhage into the spinal cord. Acute splenitis. Parenchymatous nephritis.
7. Cow Bird (*Molothrus ater*).
   Molluscum contageosum.
8. Sacred Monkey (*Semnopithecus entellus*).
   Subacute pericarditis with hydro-pericardium.
9. Hamadryas Baboon (*Papio hamadryas*).
   General tuberculosis.
10. Rhesus Macaque Monkey (*Macacus rhesus*).
    General tuberculosis.
11. Green Monkey (*Cercopithecus callitrichus*).
    General tuberculosis.
12. Brown Cebus Monkey (*Cebus fatuellus*).
    General tuberculosis.
13. Vervet Monkey (*Cercopithecus pygerythrus*).
    General tuberculosis.
14. Pig-tailed Macaque Monkey (*Macacus nemestrinus*).
    General tuberculosis.
15. Moose (*Alces alces*).
    No cause of death found.

16. Axis Deer (*Cervus axis*).
    Prolapse of the uterus following miscarriage. Gangrenous perforation of the vaginal and rectal walls with protrusion of eight inches of small intestine. Gangrene of the intestine and bladder. Ascending suppurative nephritis.
17. White-throated Monkey (*Cercopithecus albigularis*).
    General tuberculosis.
18. Guinea Baboon (*Papio sphinx*).
    General tuberculosis.
19. White Ibis (*Guara alba*).
    No cause of death discovered.
20. Black Ape (*Cynopithecus niger*).
    General tuberculosis.
21. Campbell's Monkey (*Cercopithecus campbelli*).
    General tuberculosis.
22. Ring-tailed Bassaris (*Bassariscus astutus*).
    Fatty degeneration of liver and kidneys.
23. Llama (*Llama glama*).
    Decomposition was so advanced when animal was received that no information could be derived from autopsy.
24. Red Lynx or Wild Cat (*Lynx ruffus*).
    Hemorrhagic gastro-enteritis with tape worms, thread worms, and round worms. Verminous bronchitis. Parenchymatous nephritis.
25. Geoffrey's Marmoset (*Midas geoffroyi*).
    No cause of death discovered.
26. Brown Macaque (*Macacus arctoides*).
    General tuberculosis.
27. Grivet Monkey (*Cercopithecus sabæus*).
    General tuberculosis.
28. Alpaca (*Lama pacos*).
    Cancer (medullary) of liver, gall bladder, and intestine, with perforation of the intestine and general peritonitis.
29. Chimpanzee (*Anthropopithecus niger*).
    General tuberculosis.

30. Hamadryas Baboon (*Papio hamadryas*).
    General tuberculosis.
31. Sooty Mangabey (*Cercocebus fuliginosus*).
    General tuberculosis.
32. Rhesus Monkey (*Macacus rhesus*).
    General tuberculosis.
33. Otter (*Lutra canadensis*).
    Traumatism at time of capture.
34. Capucin Monkey (*Cebus capucinus*).
    General tuberculosis.
35. Anubis Baboon (*Papio anubis*).
    General tuberculosis.
    Chronis parenchymatous nephritis.
36. Pig-tailed Monkey (*Macacus nemestrinus*).
    General tuberculosis.
37. Mongoose (*Crossarchus fasciatus*).
    Empyema from staphylococcus infection.
    Parenchymatous nephritis.
38. Black-handed Spider Monkey (*Ateles geoffroyi*).
    Lobar pneumonia.
    Fibrinous pleuritis.
39. Sooty Mangabey (*Cercocebus fuliginosus*).
    General tuberculosis.
40. Common Marmoset (*Hapale jacchus*).
    Diffuse nephritis.
41. Gray Ichneumon (*Herpestes mungo*).
    Tuberculosis of kidneys.
    Beginning miliary tuberculosis of the lungs.
42. Prong-horned Antelope (*Antilocopra americana*).
    Tubercular caries of vertebræ (Pott's disease).
43. Golden Ichneumon (*Herpestes auropunctatus*).
    Diffuse nephritis.
44. Green Monkey (*Cercopithecus callitrichus*).
    Fibrinous pleuritis and pericarditis.
    Fibrinous pneumonia (lobar).
45. Green-winged Trumpeter (*Psophia viridis*).
    Miliary tuberculosis of the liver.

46. Squirrel Monkey (*Chrysothrix sciureus*).
    Subacute enteritis.
    Slight parenchymatous nephritis.
    Distoma hepaticum.
47. Indian Antelope (*Antilope cervicapra*).
    No cause of death discovered.
48. Sooty Mangabey (*Cercocebus fuliginosus*).
    General tuberculosis.
49. Nylghaie (*Boselaphus tragocamelus*).
    Perforation of the stomach by a piece of iron wire which had been swallowed with the food. Peritonitis with gangrene of the small intestine.
50. Alpaca (*Llama pacos*).
    No cause of death discovered. Decomposition was far advanced at time of autopsy.
51. Ring-tailed Coati (*Nasua nasua*).
    No cause of death discovered.
52. Hybrid between Grivet and Green Monkey.
    Parenchymatous nephritis.
    The mother and father died of tuberculosis.
53. Black-handed Spider Monkey (*Ateles geoffroyi*).
    Lobar pneumonia.
    Acute enteritis.
54. Sooty Mangabey (*Cercocebus fuliginosus*).
    Bronchitis.
    Diffuse nephritis.
    Fatty degeneration of the liver.
    Parasites of the pancreas.
55. Gray Fox (*Canis cinereo-argenteus*).
    Catarrhal bronchitis.
    Catarrhal enteritis. (Probably distemper.)
56. Common Paradoxure (*Paradoxurus hermaphroditus*).
    Strangulation of the small intestine through a hole in the omentum, followed by intestinal gangrene and general peritonitis.
    Pulmonary tuberculosis.

57. Pig-tailed Monkey (*Macacus nemestrinus*).
    Broncho-pneumonia.
    Chronic parenchymatous nephritis.
58. Gray Fox (*Canis cinereo argenteus*).
    Broncho-pneumonia.
    Acute nephritis (Probably distemper).
59. Japanese Macaque (*Macacus fuscatus*).
    General tuberculosis.
60. Lama (*Lama glama*).
    No cause of death discovered. Decomposition far advanced when received for autopsy.
61. Crowned Pigeon (*Goura coronata*).
    No cause of death discovered.
62. Sooty Mangabey (*Cercocebus fuliginosus.*)
    Subacute bronchitis.
    Subacute enteritis.
    Parenchymatous nephritis.
63. Grivet Monkey (*Cercopithecus sabæus*).
    Broncho-pneumonia.
64. Black Spider Monkey (*Ateles ater*).
    Enteritis with ulceration of Peyer patches, acute swelling of lymph glands and spleen. Slight parenchymatous nephritis. The lesions resembled those of typhoid fever in man. Cultures from heart, spleen, mesenteric glands, liver and kidneys, showed only the colon bacillus.
65. Campbell's Monkey (*Cercopithecus campbelli*).
    Disease of the liver of unknown character. The surface of the liver was studded with elevated, umbilicated nodules about the size of a pea. The nodules were yellowish in color and firmer than the surrounding liver tissue, in some instances partly calcified; sections of the liver showed similar nodules throughout the substance. No tubercle bacilli were found in the nodules: and inoculation of a rabbit produced no result. Microscopic sections of the nodules showed areas of round cell infiltration, collections of leucocytes, broken down liver cells and necrotic tissue.

66. Tapir (*Tapirus terrestris*).
    Chronic enteritis followed by invagination of nine inches of the ilium into cœcum.
    Chronic parenchymatous nephritis.
67. American Elk (*Cervus canadensis*).
    Pulmonary tuberculosis.
    Chronic nephritis.
68. Sooty Mangabey (*Cercocebus fuliginosus*).
    Parenchymatous nephritis.
    Acute bronchitis.
69. Nylghaie (*Boselaphus tragocamelus*).
    General tuberculosis (lungs, liver, spleen and mesenteric glands).
70. Prong-horned Antelope (*Antilocapra americana*).
    Verminous enteritis from the *Tricocephalus dispar*.
71. California Vulture (*Cathartes californianus*).
    Obstruction, by a pebble, of the duodenal opening of the gizzard, with great dilatation of the glandular stomach and œsophagus.
72. Sooty Mangabey (*Cercocebus fuliginosus*).
    Pigmentation of the spleen and liver.
    Parenchymatous nephritis.
    Parasite of the pancreas.
73. Sooty Mangabey (*Cercocebus fuliginosus*).
    Cyst of posterior left cerebral hemisphere.
    Chronic nephritis.
74. Green Monkey (*Cercopithecus callitrichus*).
    Fatty degeneration of the liver.
    Parenchymatous nephritis.
    Cause of death probably some form of toxæmia.
75. Binturong (*Arctictis binturong*).
    Miliary tuberculosis of the lungs and kidneys.
    Tubercular ulceration of the intestines.
76. American bison (*Bison bison*).
    General tuberculosis.

Table of Diseases with the Variety and Number of Animals Affected.

General Tuberculosis . . .	23 monkeys.	1 nylghaie.	1 bison.
Pulmonary tuberculosis . .	1 elk.	1 paradoxure.	
Tuberculosis of kidney . .	1 mongoose.		
Tuberculosis of liver . . .	1 green-winged trumpeter.		
Tuberculosis of vertebræ .	1 prong-horned antelope.		
Chronic nephritis	10 monkeys.	2 mongoose.	1 tapir.
	1 prong-horn antelope.		1 mule deer.
	1 elk.	1 wild cat.	1 marmoset.
Acute nephritis	1 fox.	1 axis deer.	1 monkey.
Gastro-enteritis	1 swan.	1 wild cat.	
Enteritis	4 monkeys.	1 fox.	1 tapir.
	1 prong-horn antelope.		
Pneumonia	5 monkeys.	1 fox.	
Pleuritis	2 monkeys.		
Bronchitis	3 monkeys.	1 fox.	
Peritonitis	1 nylghaie.	1 paradoxure.	
Pericarditis	2 monkeys.		
Empyema	1 mongoose.		
Hemorrhage into spinal cord	1 mongoose.		
Fatty degeneration of liver and kidney .	1 bassariscus.		
Fatty degeneration of liver	2 monkeys.		
Cancer of liver	1 alpaca.		
Perforation of stomach	1 nylghaie.		
Intestinal strangulation	1 paradoxure.		
Intestinal invagination	1 tapir.		
Obstruction of gizzard	1 vulture.		
Prolapse of uterus	1 axis deer.		
Cyst of brain	1 monkey.		
Pigmentation of liver and spleen	1 monkey.		
Parasites:—			
Tænia marginata	1 mule deer.		
Tape worm	1 wild cat.		
Thread worm	1 wild cat.		
Distoma hepaticum	1 monkey.		
Tricocephalus dispar	1 prong-horn antelope.		
Unknown parasite of pancreas . . .	2 monkeys.		
Molluscum contagiosum.	1 cow bird.		

The examinations which are here recorded were made during the period from November, 1901, to March 1, 1903. The dead animals were sent to the Pepper Clinical Laboratory and were examined by Dr. C. Y. White, to whom I wish

to express my thanks for his very careful work, carried on often under difficult and most disagreeable conditions. The facilities of the Pepper Clinical Laboratory were very generously placed at our service by the Director, Dr. Alfred Stengel.

The number of animals mentioned in this report does not by any means represent the total number which have died at the Gardens during the period covered. Birds and native animals very often die in a short time after being received, from the injuries and disturbances incident to their capture and confinement; and the majority of the more common varieties of reptiles succumb before the end of the winter season. Such animals were not submitted to *post mortem* examination.

In ten of the animals examined no cause of death was discovered, though careful investigation of all the organs was made, as well as bacteriological examination of the blood. Change in food, water, temperature and general environment, may cause the death of wild animals in captivity, without producing gross or apparent lesions of any of the structures of the body. It is probable that in some cases the animal dies of a toxæmia due to improper food, though we have been unable to determine the existence of this condition at autopsy. The *post mortem* changes have usually rendered the bacteriological examination very unsatisfactory.

In the cases of tuberculosis—unless the character of the lesions was beyond doubt—the tubercle bacilli were sought for, and in uncertain cases inoculation experiments were made. Tuberculosis occurred most often in the monkeys, though one bird—the green-winged trumpeter—had tuberculosis of the liver. The tubercular lesions of the monkeys were very extensive. Every structure in the thorax and the abdomen has been found to be invaded by this disease. In several cases tubercles were found in the walls of the heart,—a very unusual seat of the disease in man. In making autopsies on tubercular monkeys we have been impressed by the vitality which not only enabled these ani-

mals to live until the disease had become so extensive, but even to appear in fairly good health until within a few days or hours of death. In many cases they seemed as active and well as their healthy companions.

Cough may be absent or but slightly marked notwithstanding very extensive lesions of the lungs. We have never observed monkeys to expectorate; if the pulmonary infection is primary it is probable that the intestinal and peritoneal lesions which were present in nearly all cases are in great part due to swallowing the pulmonary discharges.

We have not observed pulmonary hemorrhage in monkeys, either during life or at *post mortem* examination; and Mr. Arthur E. Brown informs us that during his long connection with the Gardens, he has never observed pulmonary hemorrhage in monkeys or in any other wild animals. The absence of hemorrhage in monkeys is in part due to the fact that they are usually affected by the miliary form of tuberculosis, without ulceration, destruction of tissue and the formation of cavities. We have not found a pulmonary cavity in any of the monkeys thus far examined.

An unusual number of monkeys died of tuberculosis during the first half of the period covered by this report. This was an old lot of monkeys, which had been in the Gardens for several years. The number here recorded does not, therefore, represent the average death rate from this disease. Notwithstanding the careful disinfection of the house and cages, and the isolation of suspected individuals, before the introduction of new animals, it seems at present to be impossible to prevent a considerable mortality among monkeys from tuberculosis.

Non-tubercular pulmonary diseases, pneumonia and pleuritis, were found most frequently in monkeys.

Enteritis was found in a number of animals and probably has occurred more often than is indicated in the report, as a careful microscopic examination of the intestines was only made when there were no more obvious lesions to account for the death. In case 64, the black spider monkey, the

intestinal lesions were similar to those seen in typhoid fever in man. The typhoid bacillus, however, was not found. Professor Henry C. Chapman has, in former examinations at the Gardens, found ulceration of Peyer patches in monkeys as well as in other animals. Enteritis is without doubt usually caused by the unavoidable change in the diet of the animals.

Chronic nephritis appears to be very common and to affect a great variety of animals. The histological lesions found in the kidneys were of two types: Parenchymatous changes in which the cellular changes varied from cloudy swelling to complete desquamation and necrosis, with plugs or hyaline or granular material in many of the tubules of the medulla; and parenchymatous, combined with marked interstitial, changes, where the lesions were those of a diffuse nephritis.

Chronic nephritis accompanied other pathological conditions, and may in some cases have been caused by these conditions; though in others it seems probable that it was due to the change in food and water, and lack of customary exercise. We have not determined that it was the immediate cause of death in any case. It seems probable that in some instances the "fits" with which some of the monkeys are reported to have suffered before death, were uræmic.

CHARLES B. PENROSE, M. D.

LIST OF ADDITIONS TO THE MENAGERIE DURING THE YEAR ENDING FEBRUARY 28TH, 1903.

1902.

March 1. 1 hog deer (*Cervus porcinus*) ♂ born in the Gardens, 1 Swainson's lorikeet (*Trichoglossus novæ-hollandiæ*) purchased. 1 garter snake (*Eutania sirtalis sirtalis*) and 1 box tortoise (*Terrapene carolina*) presented.

" 2. 1 alligator (*A. mississippiensis*) presented by George Bach, Philadelphia.

" 7. 1 great-horned owl (*Bubo virginianus*) presented by Dr. D. G. Metheny, Philadelphia.

" 8. 3 mute swans (*Cygnus olor*) purchased.

" 9. 1 screech owl (*Scops asio*) presented by Dr. McCullough, Philadelphia. 2 alligators (*A. mississippiensis*) presented by Master Edwin Schoen, Philadelphia.

" 10. 1 Guinea fowl (*Numida meleagris*) presented by Miss Catharine Grace, Philadelphia.

" 11. 2 American otters (*Lutra canadensis*) presented by Dr. Charles B. Penrose, Philadelphia. 1 alligator (*A. mississippiensis*) presented by Master John Owens, Philadelphia.

" 12. 1 robust kangaroo (*Macropus robustus*) born in the Gardens. 1 Mearus' deer (*Mazama texana*) ♀, 1 common jerboa (*Dipus jaculus*) ♀, 2 wild turkeys (*Meleagris gallopavo*), ♂ and ♀, 1 red-headed duck (*Fuligula ferina americana*), 1 pintail duck (*Dafila acuta*), 2 purplish guans (*Penelope purpurascens*), 1 Mexican guan (*Ortalis vetula*), 1 white-bellied chachalaca (*O. leucogastra*), 1 Egyptian monitor (*Varanus niloticus*), 1 Indian eryx (*E. johni*) 3 conical eryx (*E. conicus*), 1 Indian rat snake (*Zamenis mucosus*), 1 rainbow snake (*Abastor erythrogrammus*) purchased. 2 alligators (*A. mississippiensis*) presented by Master and Miss Hamill, Philadelphia.

" 13. 2 yellow baboons (*Papio cynocephalus*), ♂ and ♀, 2 blue-bearded jays (*Cyanocorax cyanopogon*) purchased.

" 14. 3 red-necked wallabys (*M. ruficollis ruficollis*), 1 white-fronted amazon (*Chrysotis albifrons*) purchased.

" 17. 3 alligators (*A. mississippiensis*) presented by Mrs. J. Busch, Philadelphia.

" 18. 2 cutthroat finches (*Amadina fasciata*), 2 nonpareil buntings (*Passerina ciris*), 1 chestnut-eared finch (*A. castanotis*), 1 African silverbill (*Aidemosyne cantans*), 2 crested ground parrakeets (*Calopsitta novæ-hollandiæ*), 1 gray-headed love bird (*Agapornis canus*) purchased. 1 mud turtle (*Cinosternum pennsylvanicum*) presented by A. S. Calder, Philadelphia.

" 19. 2 raccoons (*Procyon lotor*) presented by Miss Louise B. Elkins, Ashbourne, Pa. 2 Mexican conures (*Conurus holochlorus*) presented by Fred H. Womrath, Philadelphia. 2 alligators (*A. mississippiensis*) presented by Mrs. B. Harrar, Philadelphia.

" 21. 2 yellow baboons (*P. cynocephalus*) ♂ and ♀, 1 anubis baboon (*P. anubis*) ♀, 1 sooty mangabey (*Cercocebus fuliginosus*) ♀, 1 white-

throated capucin (*Cebus hypoleucus*) ♂, purchased. 2 snouty bats (*Nyctinomus brasiliensis*) presented by E. Meyenberg, Pecos, Texas.

March 22. 1 raccoon (*P. lotor*) captured in the Gardens. 1 garter snake (*E. sirtalis sirtalis*) presented by Master William Mountjoy, Philadelphia. 4 garter snakes (*E. sirtalis sirtalis*) presented by Harry Pepper, Philadelphia. 23 Poinsett's scaly lizards (*Sceloporus torquatus poinsetti*), 3 ornate uta lizards (*Uta ornata*) purchased. 2 water snakes (*Tropidonotus sipedon sipedon*) presented by J. R. Lane, Norwood, Pa.

" 24. 1 hog deer (*C. porcinus*) ♂ born in the Gardens. 1 modest finch (*Aidemosyne modesta*), 1 Bicheno's finch (*Estrelda bichenovi*).

" 26. 6 rabbits (*Lepus cuniculus*) born in the Gardens.

" 27. 1 raccoon (*P. lotor*) presented by Robert W. Lewis, Jr., Philadelphia. 1 alligator (*A. mississippiensis*) presented by George E. Keuble, Philadelphia.

" 28. 1 black-handed spider monkey (*Ateles geoffroyi*) purchased. 3 brown salamanders (*Plethodon cinereus cinereus*) presented by Elmer Flarity, Philadelphia.

" 29. 2 large-spotted civets (*Viverra megaspila*), ♂ and ♀, 1 hamadryas baboon (*P. hamadryas*) ♀, 2 Guinea baboons (*P. sphinx*) ♂ and ♀, 2 mona monkeys (*Cercopithecus mona*), ♂ and ♀, 1 blue-eyed cockatoo (*Cacatua ophthalmica*) purchased. 3 garter snakes (*E. sirtalis sirtalis*) presented by Master John Dohnan, Jr., Philadelphia.

" 30. 3 red foxes (*Canis vulpes pennsylvanicus*) born in the Gardens. 1 black snake (*Z. constrictor constrictor*), 1 corn snake (*Coluber guttatus*), 4 DeKay's snakes (*Storeria dekayi*), 1 keeled green snake (*Cyclophis æstivus*), 8 garter snakes (*E. sirtalis sirtalis*), 1 pine snake (*Pityophis melanoleucus*), 2 ribbon snakes (*E. saurita*), 1 water snake (*T. sipedon sipedon*) presented by Mrs. J. W. Lane, Norwood, Pa.

April 3. 1 alligator (*A. mississippiensis*) presented by Mrs. J. H. Mason, Philadelphia.

" 4. 1 raccoon (*P. lotor*) presented by Hon. George Hampton, Bridgeton, N. J.

" 5. 1 greater bullfinch (*Pyrrhula pyrrhula*) purchased.

" 6. 2 six-banded armadillos (*Dasypus sexcinctus*) born in the Gardens. 4 rainbow snakes (*A. erythrogrammus*), 5 black snakes (*Z. constrictor constrictor*) purchased. 2 yellow-throated parrakeets (*Brotogerys jugularis*) presented by C. Gibson Grosholz, Philadelphia.

" 7. 1 otter (*Lutra canadensis*) ♂ purchased.

" 8. 1 western diamond rattlesnake (*Crotalus atrox atrox*) presented by E. Meyenberg, Pecos, Texas.

" 9. 1 mitre snake (*Contia episcopa episcopa*) purchased.

" 10. 1 alligator (*A. mississippiensis*) presented by William H. Cox, Philadelphia.

" 11. 1 northern gray squirrel (*Sciurus carolinensis pennsylvanicus*) presented by Harry Kunkle, Philadelphia.

" 12. 1 Brimley's newt (*Desmognathus brimleyorum*), 6 many-ribbed sala-

manders (*Spelerpes multiplicatus*) presented by Julius Hurter, St. Louis, Mo. 2 Belgian hares presented by George Mahla, Philadelphia. 2 alligators (*A. mississippiensis*) presented by J. S. Yocum, Manheim, Pa.

April 14. 1 yellow-shouldered amazon (*C. ochroptera*) presented by Mrs. H. Woodruff, Philadelphia.

" 15. 1 otter (*L. canadensis*) ♀, 2 gray foxes (*C. cinereo-argenteus*), 3 passerine parrakeets (*Psittacula passerina*) purchased. 1 alligator (*A. mississippiensis*) presented by Mrs. C. Barbier, Philadelphia.

" 16. 6 prairie wolves (*C. latrans*) born in the Gardens. 3 whip snakes (*Z. flagellum flagellum*), 3 Lindheimer's snakes (*C. obsoletus lindheimeri*), 3 Emory's snakes (*C. emoryi*) purchased. 1 striated terrapin (*Clemmys insculptus*) presented.

" 18. 1 Malayan sambur deer (*C. equinus*) ♀ born in the Gardens. 1 sulphur-crested cockatoo (*C. galerita*) presented by Mrs. M. A. Tobias, Philadelphia.

" 19. 1 alligator (*A. mississippiensis*) presented by Master G. W. Geiger, Philadelphia.

" 21. 1 alligator (*A. mississippiensis*) presented by William Buehler, Philadelphia. 1 Belgian hare presented by George Mahla, Philadelphia.

" 22. 4 menobranchus (*Necturus maculatus*) presented by Prof. B. G. Wilder, Ithaca, N. Y.

" 23. 1 night hawk (*Chordediles virginianus*) presented by John Snodgrass, Philadelphia.

" 24. 1 DeKay's snake (*S. dekayi*) presented by Master Walter Kellett, Philadelphia. 1 reddish milk snake (*O. doliatus clericus*) presented by C. L. Andrews, Moorestown, N. J.

" 25. 3 king snakes (*Ophibolus getulus getulus*), 1 spotted terrapin (*C. guttatus*), 2 salt-water terrapins (*Malaclemmys terrapin*) purchased. 2 fence lizards (*Eumeces quinquelineatus*), 11 American green lizards (*Anolis principalis*), 9 wave-lined lizards (*S. undulatus*) presented by Morgan Hebard, Chestnut Hill, Philadelphia.

" 26. 1 American badger (*Taxidea taxus*), 1 ring-tailed bassaris (*Bassariscus astutus*), 2 skunks (*Mephitis mephitica*) purchased.

" 28. 2 white-crested jay thrushes (*Garrulax leucolophus*), 1 red-eared bulbul (*Pycnonotus jocosus*), 1 Malabar green bulbul (*Chloropsis aurifrons*), 1 jungle babbler (*Crateropus canorus*), 1 black-headed mynah (*Temenuchus pagodarum*), 1 Malabar mynah (*Poliopsar malibaricus*), 1 Indian mynah (*Acridotheres ginginianus*), 1 hunting crow (*Cissa chinensis*), 1 black bulbul (*Pycnonotus pygæus*), 1 striated jay thrush (*Grammatoptila striata*), 1 Himalayan tree pie (*Dendrocitta himalayensis*), 1 blue-cheeked barbet (*Cyanops asiatica*), 1 ashy-headed barbet (*C. caniceps*) purchased.

" 29. 1 Indian antelope (*Antilope cervicapra*) born in the Gardens.

" 30. 1 Belgian hare presented by Master Alfred G. Belfield, Philadelphia. 1 garter snake (*E. sirtalis sirtalis*) presented by Master William Church Longstreth, Philadelphia. 1 Say's rattlesnake (*C. confluentus*), 5 Say's bull snakes (*P. catenifer sayi*), 4 whip snakes

(*Z. flagellum flagellum*), 2 collared lizards (*Crotaphytus collaris*), 8 Texas spotted lizards (*Holbrookia texana*) purchased.

May 1. 1 Mandarin duck (*Aix galericulata*) purchased.

" 3. 1 otter (*L. canadensis*) purchased. 4 prairie wolves (*C. latrans*), 2 gray foxes (*C. cinereo-argenteus*) born in the Gardens. 1 alligator (*A. mississippiensis*) presented by Master John McCutchen, Philadelphia. 5 Poinsett's scaly lizards (*S. torquatus poinsetti*), 11 ornate uta lizards (*Uta ornata*), 2 Marcy's garter snakes (*E. marciana*), 3 spotted-necked garter snakes (*E. eques*) purchased. 1 Texas glauconia (*Glauconia dulcis*), 1 black-headed tantilla (*Tantilla nigriceps*) purchased.

" 6. 2 gray foxes (*C. cinereo argenteus*) born in the Gardens. 2 nonpareil buntings (*Passerina ciris*), 2 indigo buntings (*P. cyanea*) purchased. 1 garter snake (*E. sirtalis sirtalis*) presented by Henry Thompson, Norwood, Pa.

" 8. 1 night hawk (*Chordediles virginianus*) presented by Dr. Charles E. Bellows, Bridgeton, N. J.

" 9. 1 Brazilian tapir (*Tapirus terrestris*) ♂ purchased. 1 barn owl (*Strix flammea-pratincola*) presented by Charles Lennig & Co., Philadelphia.

" 10. 2 American bison (*Bison bison*), ♂ and ♀, purchased.

" 12. 7 silver pheasants (*Gennæus nycthemerus*) born in the Gardens. 2 Say's king snakes (*O. getulus sayi*), 1 spotted-necked garter snake (*E. eques*), 3 H-spotted snakes (*C. subocularis*), 1 Graham's leaf-nosed snake (*Salvadora grahami*), 1 collared lizard (*C. collaris*), 19 common horned lizards (*Phrynosoma cornuta*), 3 least-horned lizards (*P. modestum*), 10 Poinsett's scaly lizards (*S. torquatus poinsetti*), 1 ornate uta lizard (*U. ornata*) purchased. 1 red-fronted Amazon (*C. vittata*), 2 black snakes (*Z. constrictor constrictor*), 2 Say's bull snakes (*P. catenifer sayi*) exchanged. 1 screech owl (*S. asio*) presented by Master Douglass March, Philadelphia.

" 14. 2 salt-water terrapins (*M. terrapin*), 3 mud turtles (*Cinosternum pennsylvanicum*), 1 king snake (*O. getulus getulus*) purchased.

" 16. 1 Indian elephant (*Elephas indicus*) ♀ presented by Dr. Thomas Biddle, Philadelphia. 1 lion (*F. leo*) ♀ received in exchange. 1 lion (*F. leo*), 2 doguera baboons (*P. doguera*), ♂ and ♀, 1 hamadryas baboon (*P. hamadryas*) ♂, 1 black ape (*Cynopithecus niger*), 2 Japanese macaques (*M. fuscatus*), ♂ and ♀, 4 yellow baboons (*P. cynocephalus*), 2 anubis baboons (*P. anubis*), 9 sooty mangabeys (*C. fuliginosus*), 1 white-collared mangabey (*C. collaris*), 3 green monkeys (*Cercopethecus callitrichus*), 1 grivet monkey (*C. sabæus*), 1 pig-tailed macaque (*M. nemestrinus*), 1 bonnet macaque (*M. sinicus*), 1 long-eared fox (*Otocyon megalotis*), 1 raccoon-like dog (*C. procyonoides*), 1 axis deer (*Cervus axis*), 1 Japanese deer (*C. sika*), 2 common seals (*Phoca vitulina*), 2 European otter (*Lutra lutra*), 2 coypu rats (*Myopotamus coypus*), 2 whooper swans (*C. musicus*), 2 crowned pigeons (*Goura coronata*) purchased.

" 17. 9 golden pheasants (*Chrysolophus pictus*) born in the Gardens. 1 Say's bull snake (*P. catenifer*), 1 Le Conte's snake (*Rhinochilus lecontii*) presented by E. Meyenberg, Pecos, Texas. 1 garter

snake (*E. sirtalis sirtalis*) presented by Masters Young and Berry, Philadelphia. 1 horned lizard (*Phrynosoma cornuta*) presented by Miss Bessie Chapman, Philadelphia. 1 mud turtle (*Cinosternum pennsylvanicum*) presented by Forrest W. Kolb, Easton, Pa.

May 18. 2 Pacific rattlesnakes (*Crotalus oregonus*) purchased. 1 alligator (*A. mississippiensis*) presented by Master McCausland, Philadelphia.

" 19. 1 yellow baboon (*P. cynocephalus*) ♂ presented by Dr. Thomas Biddle, Philadelphia. 1 elegant bull snake (*Rhinechis elegans*), 1 pine snake (*P. melanoleucus*) purchased.

" 20. 8 European rabbits (*Lepus cuniculus*) born in the Gardens. 3 spotted-necked garter snakes (*E. eques*), 1 Marcy's garter snake (*E. elegans marciana*), 1 Texas whip snake (*Z. tæniatus ornatus*), 1 collared lizard (*C. collaris*), 4 Poinsett's scaly lizards (*S. torquatus poinsetti*), 3 tessellated lizards (*Cnemidophorus tessellatus*), 3 Marcy's wave-lined lizards (*S. consobrinus*) purchased.

" 21. 5 prairie dogs (*Cynomys ludovicianus*) born in the Gardens.

" 22. 1 Le Conte's snake (*R. lecontii*), 1 California pine snake (*P. catenifer catenifer*), 2 Blainville's horned lizards (*P. blainvillei*) purchased. 2 alligators (*A. mississippiensis*) presented by Mrs. P. G. Salone, Philadelphia.

" 24. 3 burrowing owls (*Splotyto cunicularia hypugæa*) purchased. 1 American crocodile (*Crocodilus americanus*) presented by Hugh L. Willoughby, Philadelphia.

" 25. 1 screech owl (*S. asio*) presented by Miss Bella Dickinson, Philadelphia.

" 26. 1 tayra (*Galictis barbara*) presented by J. F. Enders, Philadelphia. 3 Guinea fowls (*Numida meleagris*) presented by H. W. Biddle, Paoli, Pa. 4 screech owls (*S. asio*) presented by T. F. Collins, Philadelphia. 3 alligators (*A. mississippiensis*) presented by Master William V. Sauter, Philadelphia. 1 western diamond rattlesnake (*C. atrox atrox*), 2 Say's king snakes (*O. getulus sayi*), 1 Say's bull snake (*P. catenifer sayi*), 1 whip snake (*Z. flagellum flagellum*), 2 Marcy's garter snakes (*E. elegans marciana*) purchased.

" 27. 1 Persian wild ass (*E. hemisonus onager*) ♀, 4 Amherst's pheasants (*C. amherstiæ*) born in the Gardens. 2 Pacific rattlesnakes (*C. oregonus*), 3 California pine snakes (*P. catenifer catenifer*), 3 Blainville's horned lizards (*P. blainvillei*), 9 slender salamanders (*Batrachoseps attenuatus*) purchased.

" 28. 1 kangaroo rat (*Dipodomys ambigius*) presented by E. Meyenberg, Pecos, Texas.

" 29. 1 ring-tailed coati (*Nasua nasua*) presented by Harry Nuding, Philadelphia. 1 Levaillant's amazon (*C. levaillanti*) presented by Mrs. Bertie Buck, Philadelphia.

" 30. 2 "chow" dogs presented by Dr. J. J. Kinyoun, Philadelphia. 1 hog deer (*C. porcinus*) born in the Gardens.

" 31. 1 Gila monster (*Heloderma suspectum*) presented by Morgan Hebbard, Chestnut Hill, Philadelphia. 1 bullfrog (*Rana catesbiana*) presented by Benjamin Yewdale, Philadelphia. 1 pine snake (*P. melanoleucus*), 1 least-horned lizard (*P. modestum*) purchased.

June 1. 1 garter snake (*E. sirtalis sirtalis*) presented by Herbert F. Bawden, Philadelphia.

June 2. 1 Holbrook's water snake (*T. rhombifer*), 3 black snakes (*Z. constrictor constrictor*) presented by Julius Hurter, Sr., St. Louis, Mo. 4 diamond rattlesnakes (*C. adamanteus*), 1 ground rattlesnake (*Sistrurus miliarius*), 1 black snake (*Z. constrictor constrictor*), 2 chicken snakes (*C. quadrivittatus*), 1 corn snake (*C. guttatus*), 1 harlequin snake (*Elaps fulvius*), 10 hog-nosed snakes (*H. platyrhinus*), 12 king snakes (*O. getulus getulus*), 4 pine snakes (*P. melanoleucus*), 1 water snake (*T. sipedon sipedon*), 1 whip snake (*Ż. flagellum flagellum*), 1 scarlet snake (*Cemophora coccinea*) purchased.

" 3. 2 banded rattlesnakes (*C. horridus*) purchased. 1 blue-fronted amazon (*C. versicolor*) presented by Mrs. William H. Slack, Philadelphia.

" 5. 1 robust kangaroo (*M. robustus*) born in the Gardens.

" 6. 3 western diamond rattlesnakes (*C. atrox atrox*), 1 whip snake (*Z. flagellum flagellum*) purchased. 1 alligator (*A. mississippiensis*) presented by Malcolm Irvin Davis, Philadelphia.

" 7. 1 barn owl (*S. flammea pratincola*) presented by Frank Weideman, Philadelphia. 1 fallow deer (*C. dama*), 1 hog deer (*C. porcinus*) born in the Gardens.

" 8. 6 wood ibises (*Tantalus loculator*) purchased. 6 wild turkeys (*Meleagris gallapavo*) born in the Gardens.

" 9. 1 chestnut-bellied finch (*Munia atricapilla*) presented by Frederick Herbert Gibbs, Philadelphia. 2 Pacific rattlesnakes (*C. oregonus*) 1 Hammond's garter snake (*E. hammondi*), 1 Boyle's king snake (*O. getulus boylii*), 2 bridled whip snakes (*Z. flagellum frenatus*), 2 California pine snakes (*P. catenifer catenifer*), 7 Blainville's horned lizards (*P. blainvillei*), 14 occidental wave-lined lizards (*S. occidentalis*) purchased.

" 10. 1 Japanese deer (*Cervus sika*) ♀ presented by New York Zoological Society.

" 11. 1 Milk snake (*O. doliatus triangulus*) presented by Dr. H. D. Martien, Philadelphia.

" 12. 4 Muhlenberg's terrapins (*C. muhlenbergi*) presented by Sanford Omensetter, Media, Pa. 3 brown water snakes (*T. taxispilotus*), 6 banded water snakes (*T. sipedon fasciatus*) presented by New York Zoological Society. 5 Say's rattlesnakes (*C. confluentus*), 2 Say's king snakes (*O. getulus sayi*), 1 Le Conte's snake (*Rhinochilus lecontii*) purchased. 2 common deer (*Mazama americana*) born in the Gardens.

" 13. 1 hunting crow (*Cissa chinensis*), 1 red-vented parrot (*Pionus menstruus*) purchased. 1 alligator (*A. mississippiensis*) presented by S. P. Stambach, Philadelphia.

" 14. 1 chattering lory (*Lorius garrulus*) purchased. 1 alligator (*A. mississippiensis*) presented by J. C. Cavender, Philadelphia.

" 16. 1 western nightingale (*Daulias luscinia*), 1 European robin (*Erithacus rubeculus*), 2 serin finches (*Serinus serinus*) purchased.

" 18. 1 alligator (*A. mississippiensis*) presented by Gen. Louis Wagner, Philadelphia.

" 19. 1 barn owl (*S. flammea pratincola*) presented by John Rheinstadter.

" 20. 2 mallard ducks (*A. boschas*) presented by Dr. F. D. Kendall, Columbia, S. C.

June 21. 1 melodious finch (*Phonipara canora*), 1 chewink (*Pipilo erythropthalmus*), 1 Marcy's garter snake (*E. elegans marciana*), 1 Emory's snake (*C. emoryi*) purchased. 1 red and blue macaw (*Ara chloroptera*), 1 yellow-cheeked amazon (*C. autumnalis*) exchanged.

" 22. 1 giant salamander (*Cryptobranchus maximus*) purchased.

" 23. 1 brown pelican (*Pelecanus fuscus*) presented by Joseph Folk, Philadelphia.

" 24. 1 elk (*C. canadensis*) ♂ born in the Gardens. 1 pine snake (*Pityophis melanoleucus*) purchased.

" 25. 2 black-handed spider monkeys (*Ateles geoffroyi*) purchased. 1 alligator (*A. mississippiensis*) presented by William Zinser, Philadelphia.

" 26. 1 alligator (*A. mississippiensis*) presented by Master Morton Lipper, Philadelphia.

" 27. 2 tigers (*Felis tigris*) born in the Gardens. 1 drill (*P. leucophæus*) ♂, 1 mona monkey (*C. mona*), 1 pig-tailed macaque (*Macacus nemestrinus*), 8 sooty mangabeys (*C. fuliginosus*), 2 white-collared mangabeys (*C. collaris*), 1 white-crowned mangabey (*C. æthiops*), 3 anubis baboons (*P. anubis*), 3 baboons (*P. apio*), 9 yellow baboons (*P. cynocephalus*), 5 Guinea baboons (*P. sphinx*), 1 western diamond rattlesnake (*C. atrox atrox*),2 Say's bull snakes (*P. catenifer sayi*), 1 whip snake (*Z. flagellum flagellum*), 6 horned lizards (*P. cornuta*) purchased.

" 28. 2 Carolina rail (*Porzana carolina*), 6 Say's bull snakes (*P. catenifer sayi*) purchased.

" 30. 1 Indian antelope (*A. cervicapra*) born in the Gardens.

July 1. 1 great-horned owl (*B. virginianus*) presented by Thomas W. Murray, Philadelphia.

" 2. 1 brown thrush (*Harporhynchus rufus*), 1 European blackbird (*Merula merula*) presented by John Cugley, Philadelphia. 1 screech owl (*S. asio*) presented by Miss Pauline Kieffer, Philadelphia. 2 prairie rattlesnakes (*Sistrurus catenatus catenatus*) presented by Julius Hurter, St. Louis, Mo. 2 elegant garter snakes (*E. elegans elegans*), 6 occidental wave-line lizards (*S. occidentalis*), 12 spotted salamanders (*Salamandra salamandra*) purchased.

" 3. 1 snapping turtle (*Chelydra serpentina*) presented by Master Sidney Stubbins, Philadelphia.

" 4. 1 pine snake (*P. melanoleucus*) purchased.

" 5. 1 alligator (*A. mississippiensis*) presented by Mrs. F. G. Liebherr, Philadelphia.

" 6. 1 milk snake (*O. doliatus triangulus*) presented by Samuel M. Harrison, Media, Pa.

" 8. 1 red deer (*C. elephus*) ♂, 1 elk (*C. canadensis*) ♀ born in the Gardens. 1 rhea (*Rhea americana*) purchased.

" 10. 2 striped water snakes (*T. leberis*) presented by Douglass March, Philadelphia.

" 11. 6 Poinsett's scaly lizards (*S. torquatus poinsetti*) born in the Gardens.

" 12. 1 elk (*C. canadensis*) ♀ born in the Gardens.

" 13. 1 Muhlenberg's terrapin (*Clemmys muhlenbergi*), 1 black snake (*Z. constrictor constrictor*) presented by H. A. Walters. 1 diamond

rattlesnake (*C. adamanteus*), 1 ground rattlesnake (*S. miliarius*), 2 harlequin snakes (*E. fulvius*), 1 water moccasin (*Ancistrodon piscivorus*), 1 pine snake (*P. melanoleucus*), 1 whip snake (*Z. flagellum flagellum*) purchased.

July 15. 1 robust kangaroo (*M. robustus*) born in the Gardens.

" 16. 1 common crow (*Corvus americanus*) presented by Master Harry Forrest, Philadelphia. 1 Swainson's buzzard (*Buteo swainsoni*) purchased.

" 19. 2 six-banded armadillos (*Dasypus sexcinctus*) born in the Gardens. 1 red fox (*C. vulpes pennsylvanicus*) presented by Samuel B. Phillips, Philadelphia.

" 20. 2 black lemurs (*Lemur macaco*), ♂ and ♀, 2 mongoose lemurs (*L. mongoz*), ♂ and ♀, 2 Coquerel's dwarf lemurs (*Microcebus coquereli*), 1 grison *Galictis vittata*) ♂, tenrec (*Centetes ecaudatus*), 2 musky lorikeets (*Glossopsittacus concinnus*), 4 rosehill parrakeets (*Platycercus eximius*), 2 scaly-breasted lorikeets (*Psitteuteles chlorolepidotus*), 2 blood-rumped parrakeets (*Psephotus hæmatonotus*) purchased.

" 21. 6 mongoose lemurs (*L. mongoz*), 2 Coquerel's dwarf lemurs (*M. coquereli*) received in exchange.

" 22. 2 pine snakes (*P. melanoleucus*) presented by Craig R. Arnold, Philadelphia.

" 23. 1 elk (*C. canadensis*) ♀ born in the Gardens.

" 25. 1 banded rattlesnake (*C. horridus*) purchased.

" 26. 2 copperhead snakes (*Ancistrodon contortrix*) purchased.

" 29. 1 American bittern (*Botaurus lentiginosus*) presented by J. Hatton, Philadelphia. 1 keeled green snake (*C. æstivus*) presented by Edward Harris, Moorestown, N. J.

" 30. 1 least bittern (*B. exilis*) presented by John Cugley, Philadelphia.

" 31. 1 banded rattlesnake (*C. horridus*) and 1 copperhead (*A. contortrix*) presented by James Rourk, Philadelphia.

Aug. 2. 1 white-fronted amazon (*C. leucocephala*) presented by Charles Musser, Erie, Pa.

" 3. 1 hog-nosed snake (*H. platyrhinus*) presented by Abram C. Eby, Crewe, Va. 2 pine snakes (*P. melanoleucus*), and 1 Muhlenberg's terrapin (*C. muhlenbergi*) presented by H. A. Walters, Philadelphia. 2 banded rattlesnakes (*C. horridus*) purchased.

" 4. 1 alligator (*A. mississippiensis*) presented by Master Donald Hannan, Philadelphia.

" 5. 2 West African love birds (*Agapornis pullarius*), 1 sandhill crane (*Grus mexicanus*) purchased. 2 wood ibises (*T. loculator*) presented by A. M. Nicholson, Orlando, Fla. 2 turkey vultures (*Cathartes auru*) presented by Daniel F. Sullivan, Van Bibber, Md. 1 alligator (*A. mississippiensis*) presented by Master Floyd C. Allen, Philadelphia.

" 7. 1 Chinese mynah (*Acridotheres cristatellus*) presented by Joshua Tevis, Philadelphia. 1 great-horned owl (*B. virginianus*) presented by the *North American* Philadelphia.

" 8. 2 brown pelicans (*Pelecanus fuscus*) and 1 pine snake (*P. melanoleucus*) purchased.

" 9. 2 Mexican siskins (*Chrysomitris mexicana*), 2 green waxbills (*E. formosa*) purchased.

Aug. 13. 2 burrowing owls (*Speotyto cunicularia hypugæa*), 1 Marcy's garter snake (*E. elegans elegans*), 3 painted box tortoises (*T. ornata*) purchased.

" 14. 1 Pacific ring-necked snake (*Diadophis amabilis*), 1 yellow-bellied blacksnake (*Z. constrictor flaviventris*) purchased.

" 18. 1 alligator (*A. mississippiensis*) presented by A. T. Eavenson, Philadelphia.

" 19. 1 Carolina rail (*Porzana carolina*) presented by Charles McKinley, Philadelphia.

" 21. 1 pine snake (*P. melanoleucus*) presented by William Cramer, Tuckahoe, N. J.

" 22. 1 red-masked weaver (*Conurus rubrolarvatus*) purchased.

" 23. 1 painted terrapin (*C. picta*) presented by Miss G. Goss, Philadelphia.

" 27. 1 hawfinch (*Coccothraustes coccothraustes*) purchased. 1 yellow-shouldered amazon (*C. ochroptera*), 1 brown-throated conure (*C. æruginosus*) presented by William A. Brunner, Phillipsburg, N. J. 1 great blue heron (*A. herodias*) presented by George Porter, Philadelphia.

" 29. 13 Marcy's garter snakes (*E. elegans marciana*) born in the Gardens. 1 alligator (*A. mississippiensis*) presented by H. Sigel, Philadelphia.

" 30. 1 nylghaie (*Boselaphus tragocamelus*) ♂ received in exchange. 1 cinereus waxbill (*Lagonosticta cærulescens*), 2 hog-nosed snakes (*H. platyrhinus*) purchased.

" 31. 1 banded rattlesnake (*C. horridus*) presented by A. N. Staples, Philadelphia.

Sept. 3. 1 western diamond rattlesnake (*C. atrox atrox*), 2 Say's bull snakes (*P. catenifer sayi*), 1 leopard collared lizard (*Crotophytus wislizenii*), 3 Holbrook's lizards (*H. maculata*) purchased.

" 4. 1 common macaque (*M. cynomolgus*) presented by George Rich, Wissahickon, Philadelphia. 3 banded rattlesnakes (*C. horridus*) purchased.

" 6. 2 western diamond rattlesnakes (*C. atrox atrox*) purchased. 1 green heron (*Ardea virescens*) presented by Joseph H. Deschamps, Philadelphia. 2 prairie rattlesnakes (*S. catenatus catenatus*) born in the Gardens.

" 10. 5 burrowing owls (*S. cunicularia hypugæa*) purchased.

" 11. 1 painted terrapin (*C. picta*) presented.

" 12. 7 painted box tortoises (*T. ornata*) presented by E. Meyenberg, Pecos, Texas.

" 13. 2 mona monkeys (*C. mona*), 4 rhesus monkeys (*M. rhesus*), 2 black spider monkeys (*Ateles ater*), 1 wild cat (*L. rufus maculatus*), 1 Malayan paradoxure (*P. hermaphroditus*) purchased.

" 14. 2 common water snakes (*T. sipedon sipedon*), 1 brown water snake (*T. taxispilotus*) purchased.

" 16. 1 undulated grass parrakeet (*Mellopsittacus undulatus*) presented by Mrs. Charles J. J. Carter, Penllyn, Pa. 1 least bittern (*B. exilis*) presented by Fred Fuhrmeister, Philadelphia.

" 17. 1 milk snake (*O. doliatus triangulus*) presented by George Griffith, Philadelphia. 1 Say's bull snake (*P. catenifer sayi*) purchased.

" 18. 2 green monkeys (*C. callitrichus*), 2 long-tailed grass finches (*Poëphila*

acuticauda), 1 great-billed parrakeet (*Tanygnathus megalorhynchus*) purchased.

Sept. 19. 1 red-sided eclectus (*Eclectus pectoralis*) ♂ purchased.

" 20. 2 cinereus waxbills (*L. cærulescens*), 1 smaller hill mynah (*Mainatus religiosus*), 1 Himalayan tree pie (*D. himalayensis*) purchased. 1 Mexican conure (*C. holochlorus*) presented by Andrew Handerson, Philadelphia.

" 22. 1 whip snake (*Z. flagellum flagellum*) purchased.

" 26. 1 grison (*Galictis vittata*) purchased.

" 27. 2 green monkeys (*C. callitrichus*), 2 Campbell's monkeys (*C. campbelli*), 1 vervet monkey (*C. pygerythrus*), 4 sooty mangabeys (*C. fuliginosus*), 8 black lemurs (*L. macaco*), 1 grooved tortoise (*Testudo calcarata*) purchased. 1 common marmoset (*Hapale jacchus*) presented by Mrs. A. H. Chadbourne, Philadelphia.

" 28. 1 Chinese mynah (*A. cristatellus*), 2 Derby's tyrans (*Pitangus derbianus*), 2 red-backed buntings (*Emberiza rutila*), 2 Bengal weavers (*Ploceus bengalensis*), 1 red-headed weaver (*Foudia madagascariensis*), 1 chestnut-eared finch (*A. fasciata*), 1 gray-headed love bird (*Agapornis canus*) purchased.

" 29. 1 pine snake (*P. melanoleucus*) purchased.

" 30. 1 hog-nosed snake (*H. platyrhinus*) presented by Frank Riordan, Philadelphia.

Oct. 1. 2 western diamond rattlesnakes (*C. atrox atrox*), 1 Say's king snake (*O. getulus sayi*) purchased.

" 2. 1 brown thrush (*H. rufus*) presented by Walter Beveridge, Philadelphia.

" 3. 1 gray fox (*C. cinereo-argenteus*) purchased.

" 6. 1 Emory's snake (*C. emoryi*), 7 collared lizards (*C. collaris*), 4 horned lizards (*P. cornuta*), 11 Texas spotted lizards (*Holbrookia maculata*), 5 Marcy's waved-lined lizards (*Sceloporus consobrinus*) purchased.

" 8. 1 dog-faced rattlesnake (*C. molossus*), 1 small spotted rattlesnake (*C. triseriatus*) purchased. 3 copperhead snakes (*A. contortrix*) presented by Forrest W. Kolb, Easton, Pa.

" 9. 1 weeper cebus (*C. capucinus*) purchased.

" 12. 1 reed bird (*Dolichonyx oryzivorus*) presented by R. Keller, Philadeldelphia. 1 Texas whip snake (*Z. tæniatus ornatus*) presented by James C. Wigham, Philadelphia. 1 painted terrapin (*C. picta*) presented by Thomas Pearsall, Philadelphia. 2 alligators (*A. mississippiensis*) presented by Master Philip and Miss Evlyn Arnold, Philadelphia.

" 15. 1 long-tailed glossy starling (*Lamprotornis caudatus*) purchased.

" 16. 1 ring-necked snake (*Diadophis punctatus*) presented by H. M. Ilyers, York, Pa.

" 18. 1 box tortoise (*T. carolina*) presented by Thomas Halberson, Philadelphia. 7 spotted newts (*Diemyctylus viridescens*) presented.

" 19. 1 pine snake (*P. melanoleucus*) presented by John J. Smith, Philadelphia. 1 wave-lined lizard (*S. undulatus*) presented by Daniel Hall, Philadelphia.

" 20. 1 milk snake (*O. doliatus triangulus*) purchased by S. W. Pavonarius, Philadelphia.

Oct. 21. 1 gray wolf (*C. lupus mexicanus*), 2 eyebrowed troupials (*Leistes superciliaris*), 1 variegated teguixin (*Tupinambis teguixin*) purchased. 1 gray wood rat (*Neotoma micropus*) presented by E. Meyenberg, Pecos, Texas.

" 22. 1 western sand snake (*H. nasicus*) purchased.

" 23. 1 pine snake (*P. melanoleucus*), 1 Emory's snake (*C. emoryi*) purchased.

" 24. 1 mocking bird (*Mimus polyglottus*) presented by Miss Murphy, St. Davids, Pa. 1 alligator (*A. mississippiensis*) presented by Miss S. M. Barton, Philadelphia.

" 26. 1 least bittern (*B. exilis*) presented by B. W. Roberts, New Castle, Del.

" 29. 1 Marcy's garter snake (*E. elegans marciana*), 4 Say's king snakes (*O. getulus sayi*), 2 Say's bull snakes (*P. catenifer sayi*), 1 yellow-bellied black snake (*Z. constrictor flaviventris*), 3 western sand snakes (*H. nasicus*), 4 whip snakes (*Z. flagellum flagellum*), 1 Marcy's wave-lined lizard (*S. consobrinus*) purchased.

" 31. 1 sparrow hawk (*Falco sparverius*) presented by A. Kane, Philadelphia. 5 painted terrapin (*C. picta*), 1 striated terrapin (*C. insculptus*) presented by Master Harry W. Souder, Philadelphia.

Nov. 4. 2 wild turkeys (*M. gallopavo*) presented by S. W. M. Peters, Berkeley Springs. 2 box tortoises (*T. carolina*), 2 yellow-bellied terrapins (*C. scripta*) presented by J. Hope, Philadelphia.

" 5. 2 harlequin snakes (*E. fulvius*), 2 water moccasins (*A. piscivorus*), 4 ground rattlesnakes (*S. miliarius*), 5 black snakes (*Z. constrictor constrictor*), 2 garter snakes (*E. sirtalis sirtalis*), 13 hog-nosed snakes (*H. platyrhinus*), 2 indigo snakes (*S. corais couperi*), 7 king snakes (*O. getulus getulus*), 2 pine snakes (*P. melanoleucus*), 5 whip snakes (*Z. flagellum flagellum*), 1 brown water snake (*T. taxispilotus*), 1 cyclops water snake (*T. cyclopium*) purchased.

" 8. 1 box tortoise (*T. carolina*) presented by J. Agnew, Philadelphia.

" 9. 1 red fox (*C. vulpes pennsylvanicus*) presented by L. G. Dougherty, Philadelphia. 1 pied-billed grebe (*Colymbus podiceps*) presented by Andrew V. Brown, Philadelphia.

" 10. 1 hermit thrush (*Turdus aonalaschkæ*) presented by Master Frank Nuttall, Philadelphia.

" 11. 1 screech owl (*S. asio*) presented by Master Howard Ladley, Philadelphia.

" 14. 2 Pennant's parrakeets (*Platycercus elegans*), 2 violet-necked lories (*Eos riciniatus*) purchased. 1 screech owl (*S. asio*) presented by W. Crawford.

" 15. 1 hog deer (*C. porcinus*) born in the Gardens. 1 gray squirrel (*S. carolinensis pennsylvanicus*) presented by A. M. Cooper, Philadelphia. 2 Barbary turtle doves (*Turtur risorius*) presented by Master Charles Yeager, Philadelphia.

" 17. 2 black bear cubs (*Ursus americanus*), brown variety, from British Columbia, presented by James Spear, Jr., Philadelphia.

" 18. 1 gannet (*Sula bassana*) presented by Miss Cooper, Philadelphia. 1 Say's bull snake (*P. catenifer sayi*) purchased.

" 20. 3 banded rattlesnakes (*C. horridus*) purchased.

" 27. 1 alligator (*A. mississippiensis*) presented by John Crest, Philadelphia.

Nov. 29. 1 chewink (*Pipilo erythropthalmus*) presented by Mrs. W. C. Creely, Philadelphia. 1 robust kangaroo (*M. robustus*) born.

Dec. 1. 1 tessellated lizard (*Cnemidophorus tessellatus*) presented by E. Meyenberg, Pecos, Texas. 1 Hernandez's horned lizard (*P. douglassi hernandezi*) presented by E. H. Cox, Philadelphia.

" 3. 1 red-tailed buzzard (*B. borealis*) presented by Walter M. Sharp, Bridgeton, N. J.

" 4. 1 alligator (*A. mississippiensis*) presented by Dr. B. F. R. Clark, Philadelphia.

" 5. 2 diamond rattlesnakes (*C. adamanteus*), 2 indigo snakes (*S. corais couperi*), 1 American glass snake (*Ophisaurus ventralis*) purchased.

" 7. 1 brown thrush (*H. rufus*) presented by Louis Joneck, Philadelphia.

" 9. 1 Florida terrapin (*C. concinna*) presented by J. W. Smith, Philadelphia.

" 17. 2 Japanese macaques (*M. fuscatus*) purchased.

" 18. 1 chaparral cock (*Geococcyx mexicanus*), 1 canvas-backed duck (*F. vallisneria*) purchased.

" 19. 1 yellow baboon (*P. cynocephalus*) presented by C. S. W. Packard, Philadelphia.

" 20. 1 Mexican spermophile (*S. mexicanus*) presented by E. Meyenberg, Pecos, Texas.

" 23. 1 vulpine phalanger (*Trichosurus vulpecula vulpecula*) born in the Gardens. 1 common jay (*Garrulus glandarius*) presented by Mrs. S. W. Howes, Philadelphia.

" 25. 1 Marcy's wave-lined lizard (*S. consobrinus*) presented by E. Meyenberg, Pecos, Texas.

" 27. 1 gray fox (*C. cinereo argenteus*) purchased.

" 29. 1 sparrow hawk (*F. sparverius*) purchased.

" 31. 2 alligators (*A. mississippiensis*) presented by Masters Alexander and Foreman Fleisher, Philadelphia.

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Jan. 1. 2 American white pelicans (*Pelecanus erythrorhynchus*) purchased.

" 6. 1 black bear (*U. americanus*) presented by C. C. Worthington, Shawnee-on-Delaware, Pa.

" 8. 1 Chinese jay thrush (*Garrulax chinensis*) purchased.

" 9. 1 ornamental lorikeet (*Trichoglossus ornatus*), 2 blossom-headed parrakeets (*P. cyanocephalus*), 1 Petz's conure (*C. canicularis*), 3 elegant tortoises (*T. elegans*) purchased.

" 12. 1 common dasyure (*Dasyurus viverrinus*) purchased.

" 13. 1 Malaccan parrakeet (*Palæornis longicauda*) purchased.

" 17. 1 cinereus waxbill (*L. cærulescens*), 1 African silverbill (*A. cantans*) purchased. 1 alligator (*A. mississippiensis*).

" 18. 1 tenrec (*Centetes ecaudautus*), 2 goldfinches (*C. carduelis*), 1 chaffinch (*F. cœlebs*), 2 common linnets (*A. cannabina*), 2 common siskins (*C. spinus*), 5 amadavine finches (*S. amadava*), 2 Swainson's lorikeets (*T. novæ-hollandiæ*), purchased.

" 19. 1 chaparral cock (*G. mexicanus*) purchased.

" 22. 2 common jackals (*C. aureus*) purchased.

" 24. 1 scaly-breasted lorikeet (*P. chlorolepidotus*) purchased.

" 27. 3 ring-necked snakes (*Diadophis punctatus*) presented by Master Harry Clements, Thoroughfare, N. J.

Jan. 28. 2 tawny rough-legged buzzards (*Archibuteo ferrugineus*) purchased.

" 29. 2 silky cow birds (*Molothrus bonariensis*) purchased.

" 31. 1 sparrow hawk (*Falco sparverius*) presented by William F. Florsdorf.

Feb. 3. 1 short-billed toucan (*Rhamphastos brevicarinatus*) purchased.

" 5. 1 red fox (*C. vulpes pennsylvanicus*) presented by Messrs. Louis J. and Charles A. Bergdoll, Philadelphia.

" 6. 3 black bears (*U. americanus*) born in the Gardens. 1 alligator (*A. mississippiensis*) presented by Mrs. H. K. Hess, Philadelphia.

" 9. 1 hamadryas baboon (*P. hamadryas*) born in the Gardens.

" 10. 2 bears (hybrid between *U. arctos horribilis*, ♂, and *U. americanus*, ♀) born in the Gardens.

" 13. 1 Bauer's parrakeet (*P. zonarius*), 2 brown-throated conures (*C. æruginosus*) purchased. 1 screech owl (*S. asio*) presented by Miss Lulu Simpson, Philadelphia.

" 14. 2 Indian mynahs (*A. ginginianus*), 2 common boas (*Boa constrictor*) purchased.

" 16. 1 Indian antelope (*A. cervicapra*) born in the Gardens. 1 alligator (*A. mississippiensis*) presented by David Lewis, Philadelphia.

" 17. 1 Indian antelope (*A. cervicapra*) born in the Gardens. 1 alligator (*A. mississippiensis*) presented by Mrs. William Eldridge, Philadelphia.

" 21. 2 nylghaies (*Boselaphus tragocamelus*), ♂ and ♀, born in the Gardens.

" 25. 2 Guyaquil parrakeets (*Brotogerys pyrrhopterus*) purchased.

" 28. 1 Brazilian ocelot (*Felis chibigouazou*) purchased. 2 mealy red-poll linnets (*Acanthis linaria*) purchased.